

7P
Every LADY and GENTLEMAN

THEIR OWN

D E N T I S T.

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107



708
EVERY
LADY and GENTLEMAN

THEIR OWN
549. £25
DENTIST,

As far as the Operations will allow.

CONTAINING
THE NATURAL HISTORY
OF THE
ADULT TEETH and their DISEASES.

With the most approved Methods of
PREVENTION AND CURE.

ALSO,
THOSE OF THE GUMS, &c:

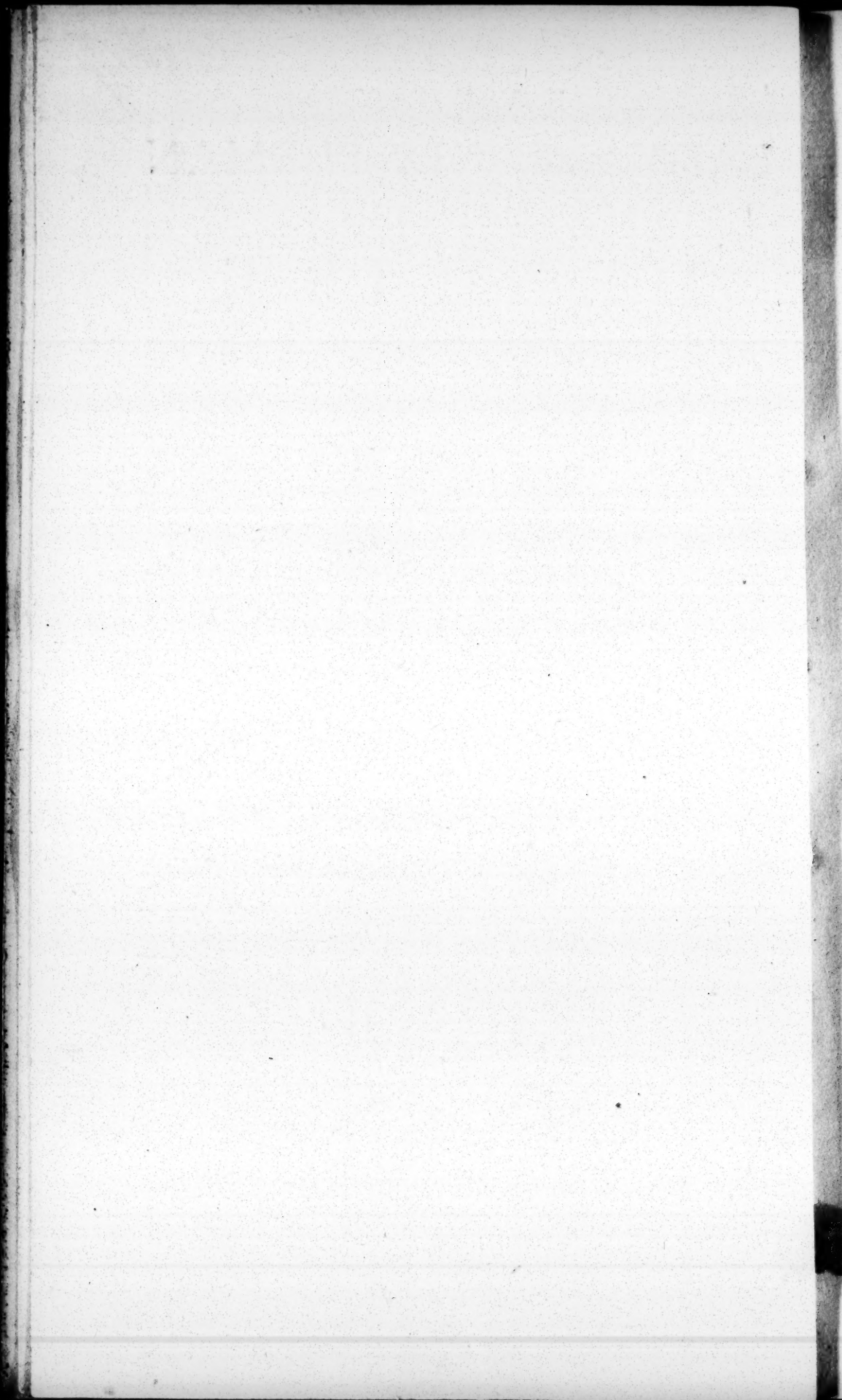
TO WHICH IS ADDED,
Dentition, and Treatment of CHILDREN at that Period.

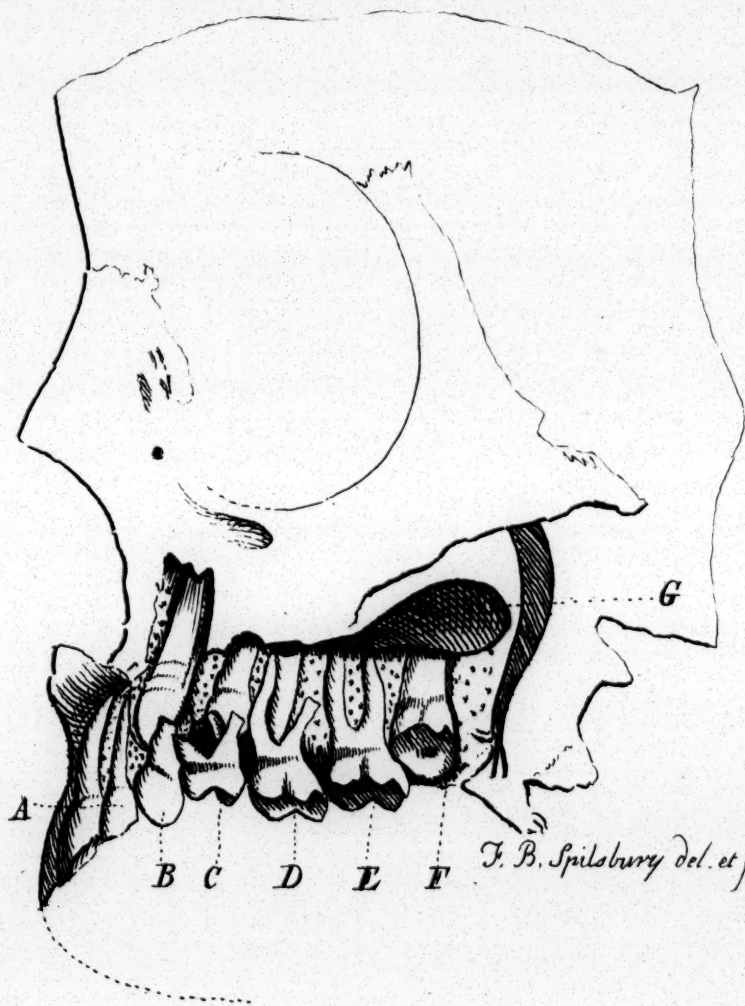
By F. B. SPILSBURY, SURGEON, &c.

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EXPLANATION of the PLATE.

FROM a subject of eight years of age, a portion of the alveoli removed, to shew the second set in the jaw, and also the maxillary sinus.

A.—The incisors of the second set; the first being shed.

B.—The cuspidatus, or canine tooth, of the second set, over which is the cuspidatus of the second permanent set; the phang of the temporary tooth is nearly absorbed.

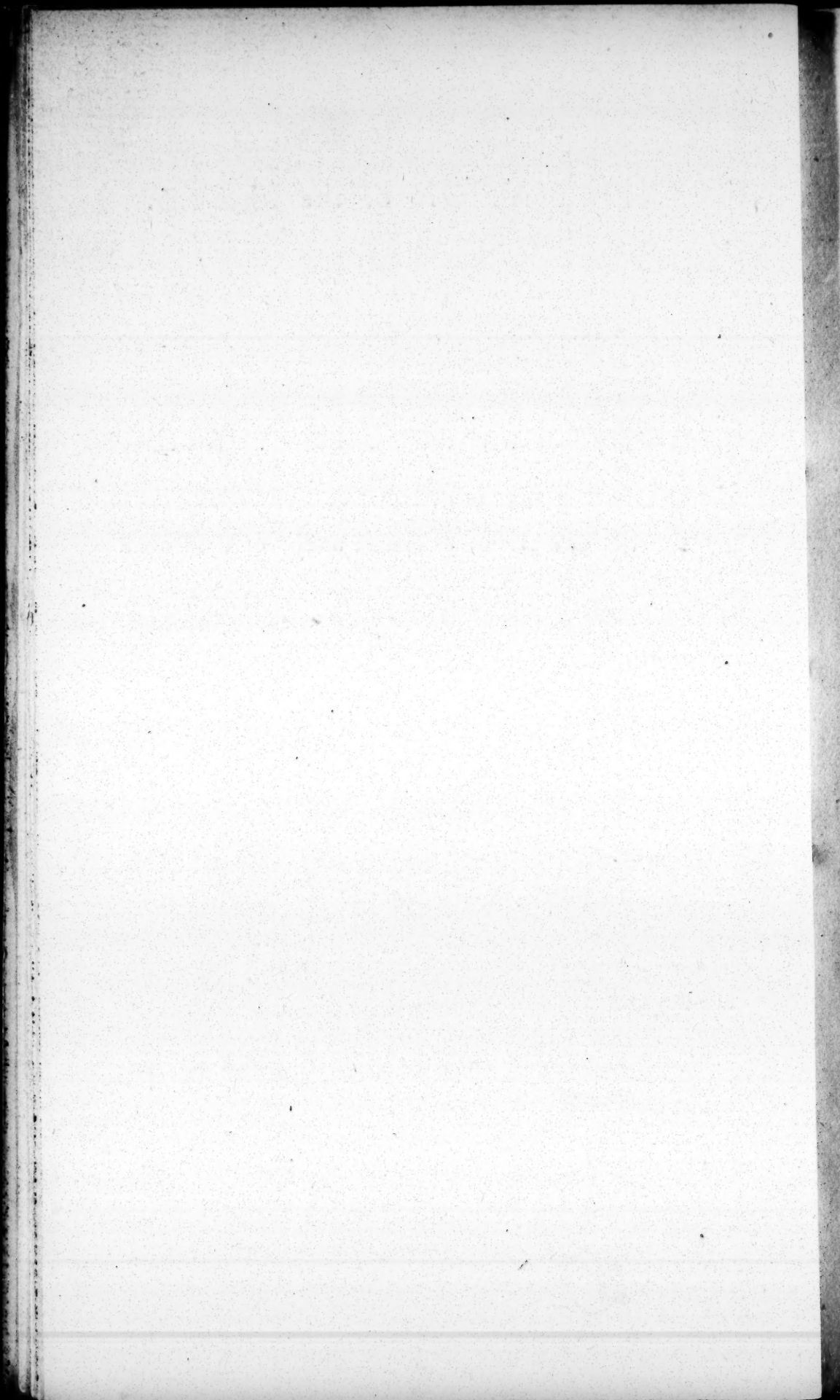
C.—The first molares, or grinder of the temporary set, the phangs of which are nearly absorbed, over which is the first bicuspid of the second set.

D.—The second temporary grinder, over which is the second bicuspid.

E.—The first permanent grinder, which begins to cut the gum at six years of age.

F.—The second permanent grinder, which appears about the twelfth or fourteenth year.

G.—The maxillary sinus, or antrum highmoriarum.



P R E F A C E.

HAVING continually observed the frequent decay and loss of teeth in both sexes, which has most frequently been owing to neglect, diseases, or improper applications, has induced me to trouble a generous public with following sheets, in hopes it may, in some measure, be a means of preserving the parts so essentially necessary, both for use and ornament. To the fair sex nothing is more disagreeable, or gives a greater damp to their vivacity, than carious teeth or foetid breath: what numbers contentedly sit down to these misfortunes, for want of proper instructions or applications, or living too remote from a dentist! On the contrary, what havoc is frequently made on good teeth by pretended nostrums? composed either of strong acids, or powders, whose mere mechanical friction alone
will

iv P R E F A C E.

will destroy the beautiful enamel. To obviate these defects, what I propose shall be as clear and distinct as possible, which I hope will be found a complete instructor. I could not leave a subject of this utility without giving my fair countrywomen the treatment of children during dentition. Those who do not reside in towns where medical advice can be immediately procured, will here have the means of preserving their offspring till assistance can be obtained, and frequently saving its life.

ON

Every LADY and GENTLEMAN

THEIR OWN

DENTIST.

ON THE ADULT TEETH, &c.

BEFORE we enter on the teeth in particular, it will be necessary to describe the parts into which they are inserted, as the upper and lower jaw, &c.

THE UPPER JAW is divided into two bones, and as the appearances in both are alike, the description of one will be sufficient. It has a great many processes and inequalities, by which it is united to the surrounding bones of the face; it has one large cavity, called its sinus; anteriorly it takes a circular sweep; the basis is broad, in which are cavities or sockets for the teeth, called alveolar processes; laterally it has an horizontal lamella, about

B half

half an inch higher than the processes, which, when it meets the process of the opposite bone, forms the roof of the mouth; by its being this distance from the base, it gives more space for the tongue; hence we find, when the alveolar is wanting, as in old people, the tongue appears too big for the mouth.

THE LOWER JAW in children is divided into two bones, in the adult but one; anteriorly it is convex; posteriorly concave, terminating in nearly an acute angle, which arises almost immediately upwards, and divides in two processes; the first of which is flat, ending in a point, and is called the coronoid process, on which is inserted a strong muscle for its elevation; the second is called the condyloid; the superior part is round, of an oblong figure, and is articulated to the temporal bone; on its upper side it has a rough surface, full of cavities or sockets for the teeth. Nearly under the coronoid process, internally, is a large foramen or hole, through which pass the nerves and vessels of the teeth.

ALVEOLAR PROCESSES, or sockets for the teeth, are composed of two lamina, or plates, one external, and another internal; they are again divided by small bony partitions, forming distinct cells for each tooth but when there are more phangs than
one,

one, these cells are again divided. On the fore part of the mouth these partitions rise higher than the external or internal lamina, giving a fluted appearance; in the lower jaw they describe a lesser circle, and a larger in the upper jaw; therefore, in old age, when they are taken up by absorption, the under jaw projects a great distance from the upper, and when the gums meet, the elevation must be greater; the chin seems to project, and the cheeks, &c. for want of proper support, fall in wrinkles. They are entirely dependent on the teeth, for when they are removed, or fall out, they also disappear.

THE GUMS are a very vascular substance, and when in perfect health, are of a fine beautiful florid red; they are between a cartilage and membrane, they are not very sensible, as we find in children and old people, for the latter are able to bite the hardest crust. There is a difference between the gums of these two periods; in the former, there is a ridge extending throughout, in the latter there is none.

THE TEETH of an adult are, in general, from twenty-eight to thirty-two in number, and are divided by some into incisors or cutting-teeth, canine or dog-teeth, and molares or grinders; of which there are four incisors, two canine, and ten molares, in

all, sixteen in each jaw; the two last of which are called *dentes sapientiæ*, or the teeth of wisdom, they not appearing till between the twenty-first and thirtieth year, from an opinion that the mental faculties had not acquired the utmost degree of perfection of which they were capable, till their appearance; they are called by the vulgar, the eye teeth. Mr. J. Hunter, with great propriety, has classed them differently: the four first teeth he continues the name *incisors*; but the two canine he calls *cuspidati*, having one point: (these, also, are called eye-teeth by nurses, from the eye being affected by the inflammation which attends their first appearance in the upper jaw) the two first, molares, he calls *bicuspidates*, having two points; to the rest he continues the name of molares. Each tooth is divided into the body, neck, and phang.—The body is all that part above the gum, which forms the cutting edge or basis: the neck is that part which is covered by the gum, it is not thinner than the rest of the tooth, but rather broader; from this the phang begins, and is that part which is hid in the alveolar process; they are rounded and tapering, all of a conical form, which gives great support from pressure: had they not been of this form, the force would have been at the end of the phang, which would have injured the blood-vessels, but by this means the alveoli and gums bear a part. Before I proceed

ceed any further, I shall point out each class separate, and first the

INCISORS; their basis is a narrow cutting edge, the anterior part of the body convex; posteriorly, concave, increasing downwards: the enamel is continued lower down in the front than at the back, and those of the upper jaw are larger and broader than the lower.

CUSPIDATI have each a single cutting point, internally, with a small line extending down to the neck; in these, the enamel covers more of the sides than the former.

BICUSPIDES have two points, the external higher than the internal, the body nearly round, the first is the smallest, and the enamel is equally covering it. These have been known to be wanting.

MOLARES or **GRINDERS** have, in general, four or five points, their basis very broad, the *dentes sapientiae* seldom differing from the rest; the enamel is pretty equally distributed, they have two phangs in the lower, and three, sometimes four, in the upper jaw; but all the other teeth have but one. From each phang extends a cavity, through which pass vessels and nerves to the membrane that lines the body of the tooth.

tooth. They are composed of two parts, the enamel and bone.

ENAMEL, cortical or vitreous part: It is a white opaque shining substance, covering the body of the tooth as far as the neck; it is the hardest part of our frame; thickest at the points; and fire does not easily affect it. Hence, if we saw a tooth in two, burn it, and then scrape it, the enamel still appears white, though the bone is destroyed and black.—Alkalies have no action on it—in acids it moulders away. Nature has given us this hard substance to cover the bony part, that it should not be worn down in mastication; and we find, in all graminivorous animals, that it is mixed with it, as in cows, horses, asses, camels, sheep, &c. for if a section of the molares of any of these beasts be exposed to the fire, you will find it extending down, almost to the bottom of the tooth. In the incisors of a horse, a portion also extends some way in the centre. There is a great advantage in this, for were they of a different structure, they would soon be worn away; but having the enamel mixed with the bone, as the latter wears, the former stands in ridges; therefore, there will always be a rough surface to grind and cut their food. This is not so in carnivorous animals, as their basis is points entirely smooth, and they have it only on the
outside,

outside. In the teeth of some animals it is black, or a dark brown, as in the incisors of a rat. By the minutest injections, we have not as yet discovered it to be vascular, but it is subject to diseases, of which I shall speak hereafter: when broke, it appears of a striated texture, all tending to a centre; it is easily separated from the bony part, either by a blow or fire; it differs from it, in not being tinged with madder; they becoming red; not so with the enamel.

THE BONY PART lies immediately under the enamel, is not vascular, is destroyed by fire; acids have the same action on it as other bones, dissolving its earth, and leaving behind the connecting membrane. Internally, it has a cavity, corresponding to the shape of the tooth, which is lined by a very sensible vascular membrane, which may here, with the greatest propriety, be called its internal periostium. This cavity is extended through the phangs, by which enters the blood-vessels and nerves; that there are nerves we cannot doubt, from the great pain that is felt when the cavity becomes exposed, and from the sensation of cold. This part, when exposed to the fire, appears of a laminated texture, which may easily be accounted for, when we come to consider its formation. Many have supposed the enamel to be solely, to hinder the bone from decaying, but we find that it is frequently

frequently exposed to the air, and yet no decay takes place. In some nations, savages file their teeth to a point, of which I have seen the head of an African Negro thus pointed, and yet no decay had taken place; and instances frequently occur, where the enamel, by abrasion, is worn away and the bone exposed, yet no decay has taken place, as you will frequently find in old people, where the grinding and cutting surfaces are worn even, yet they are a good found set of teeth as long as none are removed; where this is the case, the cavities fill up with new ossific matter, otherwise they would be exposed to the air, by which inflammation would be produced, causing a pain, commonly called the tooth-ach. Though we cannot, by injections, find that it is vascular, yet it will, like the other bones, take a red tinge, by feeding a young animal with madder; and if you leave off feeding it a few days, and then return to it again, a layer of white earth will be deposited, and then red, as will be seen by cutting the tooth in two. Though we cannot find any vessel entering the substance of this part, yet it has a periostium, covering the phangs from the neck, that is very vascular. It is liable to a number of diseases, which will hereafter be shown.

DIFFERENCE in the upper and lower jaw. In the upper jaw, the alveolar processes form the segment
of

of a larger circle, and the molares have three phangs; two are situated on the outside, and one within, and the incisors are broader than the lower: in the lower jaw the alveoli form a lesser circle, and the grinders have but two phangs, one before the other; the reason of the situation of the phangs of the upper jaw, I think is obvious, it gives them stability, by embracing the maxillary sinus; had they but two, or were they placed together, we should always be in danger when biting any hard body, of forcing the teeth into the sinus: we find the bicuspidates have but one phang, as they are out of the way of the sinus; the two molares they succeeded had three, the sinus being then over them.

ANIMALS classed by their teeth. From what I have mentioned, it will be easy to distinguish the food of animals by the form of their teeth, whether vegetable or animal; where the quantity of food that is required as animal, is less than vegetable, there also less trituration is necessary; therefore there is a difference in the arrangement of the enamel. In the external form we distinguish a cutting edge, but the carnivorous animals teeth are pointed; the cuspidati of these are much larger and longer, for the purpose of seizing their prey; but the greatest difference is in the grinders; they in carnivorous animals are composed

C

of

of points (not broad surfaces) and are better adapted for breaking bones and tearing flesh, and all their enamel is on the outside. In graminivorous animals their tusks are short, but the grinders have broad surfaces, and by wearing down, do not become smooth, but increase in their cutting edges; the reason I have before mentioned.

MAN, an omnivorous animal, has teeth suited to both, more inclining to carnivorous, but I do not mean that he is to tear his food raw to pieces; the Almighty Being has given him superior instinct over the brutes of the earth, and he takes both the animal and vegetable kingdom for his nourishment, nicely culling their sweets to his various uses; prepares them with delicacy to his taste, and avoiding those that are injurious to his health.

There is a great variation in the teeth of animals, some not only have them in the mouth, but in the throat also, as in fish; others in their stomach, as the lobster and crab, of which there are three (commonly called the lady.) On the banks of the Ohio is found a great number of bones and teeth of enormous size, supposed to belong to the elephant; but on inspection, they have a great number of points, which prove them

to

to be carnivorous; for further particulars on this subject, I shall refer you to Buffon.

FORMATION OF THE TEETH is different to the growth of bone, they have to make their way through the pulp, periosteum, and gums: The first appearance is a pulpy substance, very vascular, and in shape corresponding to the body of the tooth in which it is placed. On this pulp the ossific matter is deposited: in an incisor it begins at three points, cuspidatus one, bicuspis two, and molares at four or five. Over this is a membrane situated, exactly corresponding to the form of the pulp below, dipping into all its inequalities; it is this membrane that deposits the enamel, for as soon as the pulp has thrown out ossific matter at the points, this membrane (by some called pulp) above, covers it with a fine layer of enamel, which it continues to deposit till the tooth is cut; hence we learn the reason of its being thicker in some places than in others. The inferior pulp lengthens as the tooth is forming into phangs, the bony matter is still deposited till it admits of only sufficient room for the vessels and nerves for the nourishment of the tooth. From the neck extends the periosteum, which forms a boundary to the enamel, which may be easily seen, by having a fresh extracted tooth placed in water. The incisors and cuspidati require about six or seven

years for their formation ; bicuspides seven or eight years ; and molares twelve years.

Diseases of the Teeth, Gums, &c.

IT has, in general, been the custom, when speaking of the diseases of the teeth, to begin with their decay ; but as this is frequently caused, from uncleanliness, or improper management, I shall therefore begin with the methods of preserving and cleaning a good set : and first, it must be observed, that wherever there are in the human body fluids secreted, that by rest they will deposit or chrySTALLIZE an earthy matter, as in the bladder, kidneys, &c. and on the teeth tartar (so called), this substance concretes on the fore parts of the tooth, and on the hind part, but not on the sides, though frequently on the base of the molares, increasing in substance ; and as it is deposited, presses the gum down, which it excoriates, the discharge becomes putrid, and foetid breath constantly ensues. This increasing by its mechanical pressure will, in time, raise the tooth out of the socket, and by this means they are, in part, absorbed. The process, if suffered to continue, goes on till the tooth drops out, loaded with
tartar

tartar ; of which, I have seen an incisor so loaded, that when the mouth was shut, it appeared as a larger tumour. This deposit in some is habitual, but by proper care may easily be removed. Alkalies, while a mucus, will remove it ; acids will dissolve it : and therefore, we always find that people who eat a large quantity of fruit, have very white teeth.

It is to be removed by frequently washing the mouth with fluids, powders, picking the teeth, and scaling.

REMOVAL BY FLUIDS. Frequently washing the mouth is of infinite service, and for which various fluids have been recommended, as water, wine, vinegar, and sweet spirit of nitre.

WATER, though the most simple, I prefer, as you can here wash off the loose particles, by simple lotion, yet, if you use a little friction with a piece of cloth on the finger, a piece of liquorice root, or a brush, you will always, in a degree, hinder chrySTALLIZATION ; if this is done every morning and after meals, it will keep the mouth sweet and the teeth healthy.

IN

IN WINE there is always a predominant acid, it will dissolve the tartar, but in time, I am fearful, will destroy the enamel; the former, with the brush, has all its qualities without this disadvantage.

VINEGAR, on a certainty, destroys the teeth, and its action on them is known by that disagreeable sensation, setting them on edge, giving them a rough feel; this is caused by the acid acting on and dissolving the enamel, causing roughness, and destroying the beautiful polish.

SPIRITS. Those who recommend them, say they harden the gums, keep the mouth sweet, and prevent the decay of the teeth; how far it answers that purpose I will not determine, but there is one certainty, which is, by constant use the delicacy of taste is lost, shall therefore leave it to choice. Sweet spirit of nitre has been recommended, but I hope no one, after the perusal of this pamphlet, will use it. When the tartar has concreted in a large quantity, mechanical means are used for its removal; the first and most simple is picking the teeth: this operation is not only useful at meals, but also in removing the tartar, and destroying the chrystals; it never should be done but by a quill, or some such soft yielding body; pins are at all times injurious.

BY

BY POWDERS. Which, when properly prepared, should act mechanically, without injuring the enamel; these compounds, must be allowed to be of great efficacy, and therefore, I shall give the properties of every substance, which they are in general composed of; and shall class them under four heads: Animal, Vegetable, Mineral, and Salines.

A N I M A L.

Cuttle-fish bone is the produce of a fish so called, it is a calcareous earth, united to animal matter; an excellent dentifrice, not hard enough to injure the enamel, but of sufficient firmness to remove the tartar.

CALCINED HARTSHORN has nearly the same properties.

V E G E T A B L E S.

GUM MYRRH. A concrete substance, of a fragrant smell, brought from the East-Indies. This, at first taste, is not very pleasant, but gives a lasting fragrance to the breath, is of infinite service to the gums, in healing their ulcers, and is at all times worthy of the
dentist's

dentist's notice, where the breath is affected, or the gums ulcerated.

ORRIS ROOT. A species of the flower-de-luce; this gives to dentifrices a perfume, resembling violets; hence sometimes called violet-powder: this is only of use as a temporary sweetener of the breath.

MINERALS.

ROSE PINK. Calcareous earth, stained by a colouring matter; the only use for this is to give dentifrices an agreeable colour, which, by exposure to air, soon loses its beauty.

BOLE ARMENIC. A nasty, dirty, argillaceous earth, with a small portion of iron, of no utility without it is debased.

PUMICE STONE. A lava from Mount Vesuvius, a half vitrified body; a slow, though sure destroyer of the enamel, by mere mechanical friction.

SALINES.

SALINES.

SANDIVER, GLASS-GALL. A strong alkali, swimming on the top of melted glass; a worse application than the former; it is sometimes united to sal ammoniac with no better effect.

ALUM. Pure argil (or clay) united with the vitriolic acid. This astringent is of great service when ulcerations or frequent scorbutic hæmorrhages take place.

BORAX has been recommended for the same purpose.

CREAM OF TARTAR has frequently been the basis of tooth-powders: this is no more than the common tartar purified; it is a peculiar acid united to the vegetable alkali; as the acid is predominant, I never use it.

VITRIOLATED TARTAR. Vitriolic acid, united to the vegetable alkali, if well prepared, will act no better than the cuttle-fish bone; if the acid prevails, will soon destroy the teeth.

D

All

All these substances, either single or combined, are most commonly applied with a brush, cloth, or piece of liquorice root ; either of them may be employed with utility in various circumstances, as for instance : the brush and the root will carry the powder between the teeth and inequalities, while the finger covered with cloth, will bear great stress on their bodies. If the gums bleed at every repetition, so much the better, as after this granulations will arise, increase, and in time have a beautiful redness. Always wash your mouth with cold water immediately after the use of the powders, to carry off the remaining particles between the teeth, which are very disagreeable. It is always observable that there is a peculiar pleasant sensation after cleaning them, and whatever food you take afterwards has an additional relish ; this can only be owing to taking away the disagreeable tartareous matter. Thus the properties of a good tooth powder must consist of hardness sufficient to remove the tartar without injuring the enamel, to preserve the gums, and by its aromatic quality give a permanent perfume to the breath. It is some time before a powder to answer these purposes can be compounded, and must be from long experience, and a perfect knowledge of the materia medica. What I recommend to the public I have used some years, and have witnessed its good effects ; and by the continual use of it have known

disagreeable

disagreeable habitual foetid breaths entirely removed, as well as fastening the teeth, giving them a beautiful whiteness, and removing the pains in the gums.* On the contrary, all powders should be avoided that have any acid in their composition, or substances of sufficient hardness to injure the enamel; powders of this class give the teeth a pearl whiteness, take off the polish, and at the same time injure the gums: if the gums have receded from the neck of the tooth, the bony part will be affected by them, and soon fall into decay.

The next mechanical means is when instruments are used for the purpose of scraping off the collected matter, for which there are different kinds, that compose what are commonly called scaling instruments, of which there are in general six, in a case, viz. the file, to take off any inequalities or specks out of the enamel; the hoe, for the top teeth; the engraver, for the lower; the triangle, for the inside; the spear, to clean between the teeth; and the bent spear, for the hind teeth; these are the usual set, though there are variations.

SCALING THE TEETH. Before you proceed to the operation, you should always have in readiness

D 2

a glass

* For which see the postscript.

a glafs of pure water, bafon to spit in, water and towels to wafh the hands, to wipe the mouth, and inftruments; alfo tooth powders, brufhes, &c. It is in general the cuftom after they are fcaled, to ufe an acid, but as the ufe of it is dangerous, and requires great nicety, I fhall here omit it.

Having placed yourfelf before a glafs, in a good light, firft begin to remove the tartar from the lower fet of teeth, which may be done by placing the engraver a little below the gum, and then gently raifing the point, continue the fame to each tooth. On the infide do the fame with the triangle, by placing it as low down as poffible without injuring the gums, and then pulling it gently up, the tartar will feparate; act the fame by the upper teeth; and for the teeth farther back, ufe the bent fpear. Having by this means removed the tartar, in many cafes a blacknefs will remain, which in a little time will be removed by the powder.

Scaling the teeth is not neceffary above once in a year or two, if the mouth is kept clean by the means mentioned. To ufe the powder, take a fmall bit of rag, which lap round the finger, dip it into it, and rub the tooth pretty briskly, if by this means you cannot get at the inequality, roll a piece of rag on a
fkewer

skewer, and apply it, or with a piece of liquorice root dipt in it; immediately after apply the brush, this will take off the remaining specks: finish the operation by washing the mouth well with red wine and water.

Where there has been a large collection of tartar, there has always been diseased, putrid, stinking breath, and gums which bleed when touched, look ragged, and recede from the neck of the tooth. In these cases something must be done for their immediate growth; and I have frequently found a tooth so loose as to be obliged to hold it down in the socket with one hand while I have scaled it with the other, and afterwards to apply a ligature of silk or silver wire round it, and fasten it to the other for fear of dropping out. The ligature should be applied as high as possible on a tooth of this kind, and as low on the teeth on each side: if it be one of the bicuspides, carry the ligature between the points. The best method is to make a knot on the loose tooth, bringing the end round the teeth on each side, cross and fasten.

Many applications have been proposed to heal and renew the gums; but take this advice, not to use any application in which there is any acid, as is too often the case with medical men to use vitriol. The few following

following formulæ may be used with success, always applying a small quantity after using the powder : if the gum is very painful, you ought to have a very soft brush.

Take of *Simple tincture of myrrh* 1 oz.

Rose water 1 $\frac{1}{2}$ oz.

Laudanum 10 drops.

Mix them together.

O R,

Take of *Tincture of myrrh* 1 oz.

————— *gum lac* $\frac{1}{2}$ oz.

Alum 1 dr.

Mix them together.

O R,

Take of *Strong Infusion of Sage* 4 oz.

Alum 2 dr.

Honey $\frac{1}{2}$ oz.

Mix them together*.

To any of these you may add perfumes, as those of lavender, ambergris, musk, civet, rhodium, burgamot, &c. according to your own taste.

DECAY

* Or see the postscript.

DECAY OF TEETH from Rottenness. The first appearance is a small white opaque spot on the enamel (sometimes, though seldom, it begins on the inside first, the tooth then has a shining blackness) which touch'd moulders away, the bone is affected, and becomes black, this continues spreading till it is a mere shell, and then is easily by any hard body broken down, and the cavity is exposed; the membrane from action of the the external air inflames, great pain is now felt, the parts around sympathize, the gum inflames, the cheeks and eyes are swelled, great flow of saliva; the person is fearful of drawing breath, as every addition of air increases the pain; nor can they bear either cold or hot fluids in the mouth. This at length gradually subsides, leaving only a slight soreness, which at last vanishes, and it still remains a stump, liable again to inflame from slight colds, or extraneous matter. Where there has often been inflammation, the gums become diseased. The first appearance of decay in the molares is like a crack on their base. The pain is sometimes periodical, in which case I would recommend bark: carious teeth are often the cause of bad breath. Another remarkable circumstance is that they mostly decay in pairs. On the first appearance of the chalky speck it is sometimes prevented by filing it out, this (as there is no alternative) is certainly worth tryal, for if the bone becomes affected there is no cure, nor
should

should I in this case hesitate a moment to file thro' the enamel as I have before observed it is done by the Indians and yet no decay.

As the pain and inflammation of the tooth are from the nerve being exposed, various means have been adopted to prevent the access of air, as filling them with wax, galbanum, mastic, myrrh, silver leaf, gold leaf, and tea lead. The first four are only temporary and will not stay in long, and therefore I would advise the three last, but they must be applied early, for if the disease is too far advanced, and the external orifice too large, they cannot be fastened in.

STOPPING THE TEETH, is in general performed with an instrument adapted to the cavity, bent at the point; with this force into the cavity *either of the three last named substances*, after which a little mastic, and lastly close it up with a small wedge of wood which pare even with the tooth; in the fore teeth, cuspedati and bicuspidates it is sometimes possible to screw a small bit of ivory in and then file it down, which, where it can be done, is the best method,

CAUTERIZING THE TEETH. When they cannot be plugged, and inflammation still takes place, it has been the custom to destroy the nerve,
either

either by actual or potential cautery. For the actual, (or red-hot iron) there are instruments on purpose, properly adapted to the cavity of the tooth. This, when red-hot, is to be conveyed carefully into it, and if it be a double one, it must be moved about, that it may meet the openings of the phangs. The potential are, strong oil of vitriol, spirit of salt, and common caustic. The spirits are in general applied by means of a skewer; in the lower teeth they may answer, but in the upper very seldom, and you are always liable to burn the other parts of the mouth. The best of these substances is a small bit of common caustic, with a piece of lint, confined in the tooth till it takes effect: when every mean fails, recourse must at last be had to extraction; but as persons are in general terrified at the thoughts, and strive by all possible means to avoid it, a few hints on topical applications may be serviceable. Blistering behind the ear at an early period, will oftentimes remove the fit; opening the body, if the inflammation runs high, bleeding in the arm, or by leeches on the gums or cheeks; cauterizing the superior hollow part of the ear, has been strongly recommended; snuffing strong irritating powders up the nose, as snuffs, &c. also spirit of lavender, or brandy, holding fluids in the mouth, as cold water, or spirits, applying essential oils in the cavities, as oil of thyme, carraway, or æther,

(This last frequently carries off the fit, and is the best application.) Hot aromatic balsams, as that of peru, guaiacum, or stopping the tooth with opium, camphor, ginger, sweet scented flag, smoking tobacco, &c. &c. Any of these may, in many instances, have a temporary effect, but the complaint is always liable to return. If the cheeks are inflamed, fomentation and poultices are of infinite service.

As to drawing the teeth, great care is required, and some few rules are necessary; but as it will always require a dentist or surgeon, I shall give no account of the operation, but caution the operator always to be careful, and not in a hurry; from this last circumstance, I have known, not only a wrong tooth to be drawn, but two at once, owing to the claw of the instrument slipping. When he has got hold of the right tooth, he should not turn the instrument by a jerk, for it frequently happens, that by this trick, a large portion of the alveolar process has been torn off; whereas, had they turned more gradually, the parts would have given way. The tooth has come out whole, as is not oftentimes the case on the contrary. Lancing the gums before the operation, I can see very little use from it, as this can never be done complete. There is one foolish custom which should not be suffered, and that is, what they call closing the gums,
by

by pressing them together ; the wound cannot unite by the first intention, therefore this pressure is always injurious. Another is ramming salt into the orifice, destroying the coagulated blood that is to assist the cure. As the alveolar processes are thinnest on the outside, all but the last tooth, therefore should be drawn outwards. The reason this last tooth is not extracted in this manner, is owing to the coronoid process extending in a line on the outside, thickening the process, therefore it should be drawn inwards.

A tooth, if broke in the socket, the gum will grow over it, but it will cause pain at a distant period, when nature will rid herself of it by the alveolus filling up, and by that means pushing it out, but they mostly have a return of the tooth-ach at that period, therefore, if possible, it is best to extract it.

Tearing away a portion of bone becomes sometimes very troublesome, especially as the gum in these instances is always lacerated ; in this case, the tincture should be applied.

An hæmorrhage will sometimes follow, and there have been instances, when the actual cautery has been obliged to be applied, but in general, it may be stopped by lint held on the wound forcibly for some time ; if

this does not answer, apply a little blue vitriol on it, or make a plug of a piece of cork, which must be held down till the bleeding ceases.

Excrescences will sometimes arise when it has been supposed to be near well, where there is no reason to expect exfoliation; they are to be taken off by means of the caustic, actual cautery, or touching them carefully with the strong vitriolic acid.

Cold should be guarded against, as a return of pain, worse than the tooth-ach, has succeeded, a species of rheumatism.

REPLACING a tooth wrong drawn. It will sometimes happen, either from neglect of the operator, or the patient insisting on having one particular tooth extracted that has been a sound one, and perhaps one that can be but ill spared; in this case, it is always advisable to return it into the socket, but be careful to place the tooth the right way, they mostly go in with a jerk, no teeth are exempt from this practice, but care should be taken not to catch cold, nor to eat on that side, if possible, for two or three days, till it is fastened, but now and then gradually press on it with the opposite teeth; at first they may be a little troublesome, which wears off in a day or two. If any are
knocked

knocked out by a blow, or any other accident, the operation is the same; but if any dirt be on them, it must first be washed off with warm water, and this may be attempted twenty-four hours after the misfortune, breaking down the coagulated blood in the cavity with a probe. Those who have carious teeth drawn, and do not wish to lose them, should have the living principle first destroyed by boiling water, and then replaced and fastened as before mentioned, with silk or silver wire, and be careful of cold.

TRANSPLANTING TEETH. I can say very little here, as it will always require an expert dentist; but that transplanting may be done with safety, may be inferred from the proof above, and from an experiment which has been frequently tried with success, *i. e.* Take off the spur of a young cock, and immediately place it in an incision in the comb, this is to be bound down by sticking plaister till adhesion has taken place. This is always found softer than that left on the heel. I have seen a large bird which has been used in this manner, and it has a curious appearance, as the spur on the head was full grown*. There are a few remarks that may be serviceable, as always to have a smaller tooth than that which was lost; to see the person from whom it was taken, that he is healthful. Where a
living

* Mr. J. Hunter has a cock with a tooth placed in the comb.

living tooth could not be procured to fit the socket, a dead tooth has been placed with tolerable success, though they never perfectly fasten; there sometimes takes place a disease, which has been suspected to be the venereal, from an infected tooth; this is not the case, as on drawing the tooth these appearances vanish. Transplanting the teeth should always be performed when young; the gums and alveolar processes should have no disease on them, otherwise the operation will not succeed.

DECAY BY DENUDATION. Where the enamel is destroyed and the bone exposed, there the teeth have either a rough appearance or of a nasty yellow colour, and sometimes black: the first appearance is generally at the neck (without it is caused by acids, and then it is pretty general) in appearance as though they had been filed. From what cause it arises in this instance, I know not, nor can I advance any thing effectual for its cure. Keeping the mouth clean must certainly be the first intention, but where brushes are used, they should be soft, not with powders, but a little soap.

SWELLING OF THE PHANG. When a tooth has had repeated attacks of inflammation, the phangs will swell, causing great pain, &c. Here there is no other remedy than extraction.

DISEASES

DISEASES OF THE GUMS.

DISEASES of the gums may, in general, be classed under the following heads, *viz.* Gum-boils, excrescences, callous thickening, scurvy, and scrofulous.

GUM-BOILS are often produced from the swelling of the phangs of a decayed tooth, matter forms, the gum protrudes, swells, and bursts: if this happens internally, a cure may be performed, by making an incision down to the bone with a gum-lancet, and keeping it open with a little lint, till granulations take place and fill it up; but if the matter ouzes between the tooth and gum, the tooth must be extracted; if the gum-boils are not of a large size, they may frequently be rubbed down with a finger. To hasten suppuration, when very large, a roasted fig is a useful application, and when burst, wash them frequently with the tincture. This is a secondary disease; the decayed tooth is primary.

EXCRESCENCES sometimes arise large, and frequently put on a cancerous appearance, yet I have always extirpated them with success, but as this is the surgeon's province, I shall only lay down methods
that

that the patient may attempt a cure by themselves. I would advise touching it with spirit of vitriol once a day, and using the tincture. If this fails, hesitate not a moment to apply to a surgeon.

CALLOUS THICKENING OF THE GUMS.

This sometimes takes place, but when ever it does, I would recommend the treatment mentioned for excrescences.

SCURVY. I believe that this is in general very little understood, and what is commonly called by this name, is no more than an ulceration taking place from a collection of tartar, which, by scaling the teeth, effects a cure; but the true scorbutic gum is, when there is no tarterious collection, the gums glossy, bleed when touched, are exceeding sore, and painful, the breath foetid, teeth loose from the gums, receding from the neck, from the irritation the alveoli are diseased, and in the worst stages matter is continually discharged. This disease is frequently habitual; alteratives and sea bathing are of infinite service; in the mean time frequently wash the mouth with the following:

Take of *Allum* 1 dr.

Tincture of bark 2 oz.

Mix them together.

If

If the pain be very great, add about ten drops of laudanum to it. If the person is of an irritable system, I would advise the taking of bark, two or three times a day; and, if convenient, washing the mouth with the tincture, sea bathing, &c. scarrifying the gums is of the greatest utility; but where there is any tendency to SCROFULA, it by no means is proper, but at all times injurious.

Deep-seated Abcesses in the Jaws.

THESE, when suffered to break externally, at all times disfigure the face; all that I can advise here is, to leave yourself entirely to the surgeon's care, and he, by care and attention may, in the beginning, by making proper openings between the lip and gums, save much trouble and disfigurement.

MATTER, forming in the maxillary sinus. When this is the case, the patient mostly suspects some of the teeth in the upper jaw to be the cause, but on inspection, they are found to be sound. The first symptom is great pain in the jaw, the part swells, the

F pain

pain extends to the eyes and nose, and a throbbing is distinctly felt: if this is suffered to proceed, the bone becomes carious, matter makes its way externally, disfigures the face, and a tedious exfoliation takes place. This may be avoided by extracting the last tooth but one, as the phang in general pierces the cavity, if not, a probe may be passed up, breaking through the bone, on which, matter immediately follows. I have once or twice seen great difficulty in penetrating the antrum, though by an expert operator. And I have lately seen a case of this kind, where the whole of the alveolar process became affected by it, small portions of which are continually coming away, the teeth fall out, and matter dropping into the mouth, which being conveyed into the stomach, irritates the intestines; his speech is much altered, sounding through the nose; I suppose it owing to a diseased and enlarged state of the communicating foramen into the nose; here I should recommend alteratives, the use of the tincture, and keeping the mouth and nose clean.— Change of air and sea bathing should not be neglected. Little more is necessary to be done here, as they heal themselves, though some recommend a small wedge of cork to be put into the orifice, but I think it unnecessary. I would always have the parts washed with the tincture frequently. I have thus given a full account, that no one need hesitate a moment to have a tooth
drawn

drawn to save the beauty of the face. In some cases I have seen them perforate between the cheek and teeth ; here patience must be had, and using the above-mentioned mouth mixture.

Diseases of the Alveolar Processes.

FROM absorption, nothing is more shocking to a young person than the loss of teeth, giving the appearance of old age before their time. It sometimes happens, that absorption takes place faster than the deposit. In this case, the gums appear healthful, but receded from the neck of the tooth ; the teeth appear long, they become loose, and the patient, in general, complains of the ease with which they draw them, and that they are all loose ; they fly to a dentist, try every remedy, but alas ! no cure, they still continue to drop out, although the utmost attention has been paid to their nostrums, till at last, they are perfectly toothless, though perhaps not more than thirty years of age. A similar effect to this is produced where mercury has been used, the teeth drop out with the same appearances, yet from a different cause. I most heartily wish that I could offer any thing here essential, that

my fair country-women might prevent, palliate, or cure so horrid a complaint. I know of none; yet we ought at all times to attempt it by the most rational methods; as by blistering round the jaws, behind the ears, taking the bark, cold bathing, friction and scarifying the gums, frequently washing the mouth in cold water; if none of these will answer, all I can recommend is an artificial set.

FILLING UP OF THE SOCKET. A deposit of ossific matter; in this case, the tooth projects, and appears longer than the rest, this continues till at last it is obliged to be drawn. I would advise a ligature to be applied round the tooth, as beforementioned. Mr. J. Hunter mentions a case, where a lady was cured of this disease, by having a tooth extracted and replaced.

EXOSTOSIS, or an exuberance of bony matter, sometimes takes place, either from a diseased tooth, or a fracture of the processes, or jaw; its general appearance is a hard swelling or lump, which keeps encreasing; on dissection, the bone is of a cellular texture. A surgeon's advice is here absolutely necessary, and you must entirely be ruled by him.—Having thus far given you the diseases of the teeth, the next subject worthy of observation is

Nervous

Nervous Pains in the Jaws.

THE symptoms are similar to those of the tooth-ach, and as such a tooth is frequently drawn, which proves to be sound, another is suspected and drawn, yet not decayed, and so on till perhaps a whole set of teeth is extracted, at last the jaw, and sometimes that side of the tongue is painful; in this case, a person is deprived of useful parts without any benefit. This pain comes on sometimes periodically, and may arise from various causes: as sudden colds, rheumatism, irritability of the nervous system, and frequently from distress of mind. It is in these cases, that bark, steel, cold, and sea bathing, are of service; hemlock, opium, &c. also fomentations, of which I shall give proper formulæ. The first thing that ought to be applied is, a blister behind the ear on the side affected, and take one of the following pills, if the pain be violent, every night, and a wine glass of the mixture, two or three times a day:

Take of *Opium* $\frac{1}{4}$ of a gr.

Camphor 1 gr.

Extract of hemlock 2 gr.

To be made into a pill.

Take

Take of *Decoction of bark* 6 oz.

Extract of ditto 2 dr.

Mix together for a mixture.

O R,

Take of *Powdered bark* 1 oz.

Red wine 1 pint

Mixed.

O R,

Take of tincture of sal martis thirty drops in any of the above mixtures, twice a day: valerian, fresh gathered, and used instead of tea, has been found useful, the blister should be kept open by perpetual ointment, and the cold bath made use of every morning, to strengthen the system ; but where grief is the cause, remove it, if possible, and the effect will cease ; it is frequently called a love pain, and pregnant ladies are sometimes affected, in these cases, change of air, suitable company, amusements, &c. have the happiest effect. Electricity has, in many cases, been used with success.

Irregularity

Irregularity of the Teeth, &c.

A TOOTH will sometimes project higher than the rest, which is troublesome in touching the gums of the opposite side: these are to be filed down, not at once, but by degrees; if we find it still rising, we must suspect it to be a disease of the alveolar processes, and treat it accordingly.

Irregularity of the teeth is more frequent in the upper, than in the lower jaw, from want of room. The incisor and cuspidatus are frequent, but more frequently the bicuspidates. This irregularity of the teeth is sometimes so regular (allow the expression) as to appear a double row. The bicuspidates sometimes have not sufficient room, and one is placed farther back. The best time to regulate them is while the person is young, about the time they have shed the two molares; it is of no use to have the first possessor drawn, but the next tooth; and then put the rest in order, by means of ligatures, silver plates, &c.

By ligature, having drawn the tooth that is furthest out, the other is to be replaced in the following manner: make a strong ligature of doubled thread well waxed, fasten it to the two next teeth, and then
 carry

carry it round the receding tooth, and fasten to the two teeth on the opposite side; this is to be undone, and tightened every other day: by its continual pressure it will, in time replace it. Another method is by a silver plate well polished; it is to be perforated at both ends, and need not be longer than to extend to two or three teeth on each side, this is to be strongly fastened to the teeth by thread, and the spring of the plate will, in time, force the tooth in. Another irregularity is called

RABBIT MOUTH, *i. e.* where the fore teeth project, the cause is the narrowness of the sides, and the teeth too large: this, in young people may be remedied, by having the cuspidatus drawn, to give more room; and what will still assist the reformation is, a silver plate with a groove for the lower teeth; from this groove a plate is to arise, projecting outwards; so that when this is fixed on the teeth, and the mouth shut, the upper teeth fall on an inclining plane; this should be worn two or three hours every day, and will, in a few months remedy the defect; but there sometimes happens a distortion quite opposite to the former, that is, the under teeth project so far forwards, that when the mouth is shut, you may, in some people, place a finger between the teeth: this defect may, in some measure, be conquered by a similar instrument

as the former, but reversed; that is the inclining plane shall tend inwards, by this means the teeth of the upper jaw are thrown forward.

SUPERNUMERARY TEETH are sometimes produced as a cuspidatus, cutting the gum either on the inside or outside of the mouth; sometimes an incisor. They should be extracted, as they at all times injure the tongue or lips; but we seldom find the molares produce irregularities. Another circumstance sometimes occurs, where one of the first set, or milk teeth, is not cast, this should be drawn, as they always look black, and decay.

D E N T I T I O N.

A Healthy child in general cuts its teeth about the seventh, eighth, or ninth month, and the first five permanent teeth, on each side the jaw, differ from the temporary. As the two first temporary molares are succeeded by bicuspidates, owing to the lengthening of the jaw, and we find in the upper jaw, the maxillary sinus is removed farther back. A child first cuts an incisor either of the lower or upper jaw, the next to it afterwards, the incisor opposite to the first cut, then the other incisor. The molares do not appear till about the twentieth or twenty-fourth month, and the first

G

grinders

grinders appear before the cuspidati. The process of dentition is in general complete at two years of age, though there are variations; at this time they have only twenty teeth, viz. four incisors, two cuspidati, and two molares, these are all that are useful to a child, till the sixth year, when they cut the first permanent grinders on each side, thus by observing the teeth of different children, at different periods we are enabled to tell their age, by inspecting the mouth, but there is a great deal of difference to be observed, as some children are born with an incisor or two cut, while on the contrary, others do not begin to cut their teeth till twelve or eighteen months after birth. The cutting of teeth is well known to be dangerous, and to excite great inflammation, therefore fever constantly attends; affections of the bowels, as purging, &c. are favorable circumstances; as also eruptions on the skin. The pain and irritation is sometimes so violent as to cause convulsions, and even death. It has in general been supposed that the cause of the irritation was from mechanical pressure on the gums; this was a false idea; but we must not wonder at these dreadful symptoms when we consider the following circumstances, that the upper part of the tooth has three substances to penetrate. The pulp that forms the enamel; the periosteum, a tender irritable vascular membrane, that covers the teeth while in the alveoli; and lastly the gums. In this case from the irritation, absorption takes place, which

which cannot be done without an increased action, hence inflammation, &c. This gradually advances, the system in general is alarmed, the gums swell, are inflamed, great quantity of saliva is secreted, and the child has mostly its fingers in its mouth. It is pleased with any cold body on the gums; if it is not relieved by nature or art, all the symptoms increase, the fever runs high, and when attended with costiveness is dangerous. The tooth at this period either cuts the gum, or convulsions follow, sometimes it happens there are no convulsions, in that case hectic symptoms appear, which frequently carry off the infant. There are here a number of occurrences that ought carefully to be attended to, and which may in general be removed by lancing the gums at an early period; this carries them off for a time, but they will return again, and the operation ought to be repeated. It has been the idea, that by this a cicatrix is formed, which impedes the protrusion of the tooth, this however is not the case, for we always find children thus treated, have the symptoms, however dangerous before, soon disappear. If it is not properly performed, as it then cannot be of any use, it is certainly injurious, the operation is simple, and we often find many good old women in the country perform it dexterously; with a sharp edged sixpence, with good success. As it is so simple and useful an operation, I shall relate the most approved method of performing it, which should be done by an instrument properly

properly adapted, called the gum lancet, but I would have it with a rounded edge. Taking the child on your knee, press the lower jaw down, and the tongue out of your way with one hand, and with the instrument in the other, make a circular incision, both in the upper and under jaw, pressing it down till you feel the teeth; partially lancing the gums is but of little service, as it has commonly been the custom to cut on that which is the most prominent, when at the same time, the irritation may be from one more remote, which by the above method may be removed; where this operation has not been attended to, and convulsions have ensued, I think a few words on that subject, will be thankfully received by persons who have the care of infants. The first thing that ought to be done, is to put the child in warm water, up to the arm pits, and give four or five drops of æther (if possible) in a spoonful of water, rub the stomach with a little, and volatiles to the nose, as spirit of hartshorn, sal volatile, &c. you perhaps may have frequent occasion to administer it, but encrease not the dose at one time, though repeat it every ten or fifteen minutes (one of my own children took near a quarter of an ounce before recovery took place.) Laudanum I have frequently used united with it with success, about one or two drops at a time; keeping the body open is of the utmost consequence, and therefore if the child is bound administer a clyster of milk and course sugar, to which may be added, if occasion requires

quires, a dram or two of Glauber salts. Be not alarmed when the child becomes still, the convulsions in some measure cease, the eyes become fixt upwards, the lids fall, the breath suspended, then a slight return, still again, sobs, and at last, cries out, to the joy of all. At this period, all your attention must be employed; remembering first the agitation of the frame, the quantity of æther taken. A slight irritation still continuing, from which cause a violent fever always succeeds; it is this you now ought to counteract by opening the body, and relaxing the system: the following is properly adapted, and being tasteless, may be given either by itself or in food:

Take of *Emetic tartar* 4 gr.

Distilled water 2 oz.

Mix them together.

A tea-spoonful of which is generally a sufficient dose; if it pukes, repeat it in twelve hours; if a slight sickness comes on, repeat it every six hours: another good effect is, it mostly opens the body at the same time, but if it fail, give a little manna or senna. The fever will run sometimes so high, as to cause delirium; in this case, a small blister should be applied to the back, and bleed with leeches as soon as these symptoms disappear; delay not having the gums lanced (if it was not possible during the fit) for fear of a return. I am certain there are more children lost for want

want of this operation than by all other diseases incident to them. It sometimes unfortunately happens, that let them do what they will, the poor little sufferer is carried off. Though I have here given every necessary precaution requisite during this period, yet, where medical assistance can be had, I would at all times have the parents or guardians call them in ; but where this is not the case, or the practitioner resides at too great a distance, the above rules will frequently be the means of preserving the life of the infant.

A child, when it arrives at the seventh year, or thereabouts, begins to shed its teeth, and this period frequently requires the assistance of an expert dentist, more than any other, for fear of deformities taking place, and the teeth, as soon as they appear to be loose, should be extracted. It frequently happens that the first set decay ; they should be removed, for fear of affecting the second set. If shedding the teeth did not take place, the first set would be too small for the jaw. I have before mentioned there is a difference between the five temporary, and the five permanent teeth on each side ; the five temporary are two incisors, one cuspidatus, and two molares ; but the five permanent are two incisors, one cuspidatus, and two bicuspidates. The two molares are succeeded by the two bicuspidates in the upper jaw ;* the two first molares have three phangs, they being situated under the maxillary

* See the plate.

finus, but we find the teeth that succeed them have, in general, but one, for the jaw is lengthened, and the sinus is situated farther back ; and again, the teeth under it have three phangs. The shedding of the teeth is not complete till about the fourteenth year, and the four last teeth, or dentes sapientiæ, do not appear till between the twenty-first and thirtieth years. A third set sometimes makes its appearance about seventy or eighty years of age, as though nature strove to renew youth, but they are seldom of any use, cutting the opposite gum, and therefore obliged to be extracted.

ARTIFICIAL TEETH.

THE only way that a lady or gentleman can make themselves an artificial tooth is, by strongly pressing a piece of white wax into the space, and then with a knife paring it like the opposite ; at first, it will appear aukward, and perhaps will not be kept in long ; but I have known ladies wear them three or four days without having any occasion of renewing them ; and when nicely performed, can scarcely be distinguished from the other teeth ; but the loss of a tooth, especially in the front, is of great detriment, not only in sight, but the speech also, and artificial ones ought at all times to be fixed in the vacant space ;
they

they are made either of ivory, or the sea-horse's teeth; the latter is the nearest to nature, and will not, like ivory, so soon lose their colour. When there is only one or two wanting, they are fastened by ligatures, either of gold or silver wire, or by thread or silk, frequently by gold springs; many have thought that they make the breath offensive, but this is a false idea.— Good human teeth may be made to answer the same purposes, and are at all times preferable where they can be had. Whole sets of teeth are fastened by springs properly adapted to the remaining gums; but it must be remembered, that the same care is required to preserve the breath sweet, as when the natural set were existing.

P O S T S C R I P T.

THE Author's Dentifrice and Tincture alluded to in this Publication, are sold at RANDAL's Medicinal Warehouse, *Royal Exchange*; by Messrs. KEETH and Co. Perfumers, No. 30, *Haymarket*; G. DONADIEU, *Charles-Street, Soho*; J. LLOYD, Perfumer, No. 2, *York-Street, Covent-Garden, London*; and W. CLARKE, Confectioner, No. 269, *Borough High-Street, Southwark*, with proper Directions. Price 2s. 6d. each.

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